

CLAIMS

1. A method for establishing a connection for a mobile node on a communications system having a home network for the mobile node and at least one foreign network comprising the steps of:

receiving a registration request message at a foreign network AAA server;

transmitting a request to a AAA broker server to obtain information to establish a connection between the foreign and home networks; and,

receiving at the foreign network AAA server a response from the AAA broker server.

2. The method of establishing a home network connection in Claim 1 further comprising the step of:

establishing a connection with a AAA server on the home network based upon the information received from the AAA broker server.

3. The method of establishing a home network connection in Claim 1 further comprising the step of:

receiving a response from the AAA broker server with a rejection response after the AAA broker server determines that the home network is not found serviced by the AAA broker server.

Information of SLA service level agreement

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4. The method of establishing a home network connection in Claim 1 wherein the response from the AAA broker server contains the IP address of the home network to which the request should be directly forwarded.
5. The method of establishing a home network connection in Claim 4 wherein the response from the AAA broker server has multiple instances of a first value to indicate that different host networks can be contacted.
6. The method of establishing a home network connection in Claim 1 further comprising the step of:
transmitting the request to the AAA broker server for all messages to be addressed to unknown networks in order to identify the home network.
7. The method of establishing a home network connection in Claim 1 further comprising the step of:
receiving the response from the AAA broker server with a tag value that indicates the timeout value for a particular host.
8. The method of establishing a home network connection in Claim 1 further comprising the step of:
receiving the response from the AAA broker server with a session time-out value as a discretionary indication to the foreign network server on how long the home network entry should be maintained as valid on the foreign network.

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9. The method of establishing a home network connection in Claim 1 further comprising the step of:

receiving the response from the AAA broker server with a tag value that indicates a host server selection value.

10. The method of establishing a home network connection in Claim 1 further comprising the step of:

receiving the response from the AAA broker server with a certificate of the foreign network server and the host network server.

11. The method of establishing a home network connection in Claim 10 further comprising the step of:

receiving the response from the AAA broker server with a certificate encapsulated in an AVP of the foreign network server and the host network server.

12. The method of establishing a home network connection in Claim 10 further comprising the step of:

receiving the response from the AAA broker server with a certificate of the foreign network server and the host network server where the foreign network server forwards the certificate in a communication to the home AAA server.

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13. The method of establishing a home network connection in Claim 10 further comprising the step of:

receiving the response from the AAA broker server with a certificate encapsulated in an AVP of the foreign network server and the host network server.

14. The method of establishing a home network connection in Claim 1 further comprising the step of:

transmitting a request to a second AAA broker server in response to the response received by the foreign network server.

15. The method of establishing a home network connection in Claim 1 further comprising the step of:

receiving the response from the AAA broker server after the AAA broker server validates the request from the foreign network against information retained in the AAA broker server on allowed request clients.

16. The method of establishing a home network connection in Claim 1 further comprising the step of:

receiving the response from the AAA broker server after the AAA broker server validates the request from the foreign network by processing a destination attribute in an attempt to find a match on the home network.

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17. The method of establishing a home network connection in Claim 1 further comprising the step of:

receiving the response from the AAA broker server after the AAA broker server validates the request from the foreign network by processing a user name attribute in an attempt to find a match on the home network.

18. The method of establishing a home network connection in Claim 1 further comprising the step of:

receiving the response from the AAA broker server after the AAA broker server validates the request from the foreign network by processing a destination attribute in an attempt to find a match on the home network.

19. The method of establishing a home network connection in Claim 1 further comprising the step of:

contacting a second AAA broker server after a rejection response is received from the AAA broker server.

20. The method of establishing a home network connection in Claim 1 further comprising the step of:

after receiving the response from AAA broker server that services the home network, the foreign network initiates a security association pursuant to the returned information in the response message by transmitting a message to the home network from the foreign network.

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21. The method of establishing a home network connection in Claim 1 further comprising the step of:

receiving a message from the home network server at the foreign network AAA server after the home network AAA server processes a request from the foreign network server for a secure connection.

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22. A system for establishing a home network connection of a mobile node on a foreign network in a wireless communications network comprising:

a home network having a home agent coupled to a home AAA server;

a foreign network having a foreign agent coupled to a foreign AAA server,

a mobile node transmitting a request message to the foreign AAA server in a request to establish a connection between the mobile node and the home network; and,

a AAA broker server coupled to the foreign AAA server, the foreign AAA server transmitting a request to the AAA broker server to determine the location of the home network for establishing a home network connection between the mobile node and the home network.

23. The system set forth in Claim 22 wherein:

the foreign AAA server receives a response from the AAA broker server that contains the IP address of the home network to which the request should be directly forwarded.

24. The system set forth in Claim 23 wherein:

the foreign AAA server receives a response from the AAA broker server with multiple instances of a first value to indicate that different host networks can be contacted.

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25. The system set forth in Claim 22 wherein:
the foreign AAA server transmits the request to the AAA
broker server for all messages to be addressed to unknown
networks in order to identify the home network.
26. The system set forth in Claim 22 wherein:
the foreign AAA server receives a response from the AAA
broker server with a tag value that indicates a host server selection
value.
27. The system set forth in Claim 22 wherein:
the foreign AAA server receives a response from the AAA
broker server that includes a session time-out value as a
discretionary indication to the foreign network server on how long
the home network entry should be maintained as valid on the
foreign network.
28. The system set forth in Claim 27 wherein:
the foreign AAA server receives the response from the
AAA broker server with a tag value that indicates the host server
selection value.
29. The system set forth in Claim 22 wherein:
the foreign AAA server receives a response from the AAA
broker server with a certificate of the foreign network server and
the host network server.

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30. The system set forth in Claim 22 wherein:
the foreign AAA server receives a response from the AAA broker server with a certificate encapsulated in an AVP of the foreign network server and the host network server.
31. The system set forth in Claim 22 wherein:
the foreign AAA server receives the response from the AAA broker server with a certificate that is forwarded to the home AAA server.
32. The system set forth in Claim 22 wherein:
the foreign AAA server receives the response from the AAA broker server with a certificate encapsulated in an AVP of the foreign network server and the host network server.
33. The system set forth in Claim 22 wherein:
the foreign AAA server transmits a second request to a second AAA broker server in response to a rejection response received from the AAA broker server by the foreign network server.
34. The system set forth in Claim 22 wherein:
the foreign AAA server receives a response from the AAA broker server after the AAA broker server validates the request from the foreign network against the information retained in the AAA broker server on the allowed request clients.

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35. The system set forth in Claim 22 wherein:
the foreign AAA server receives a response from the AAA
broker server after the AAA broker server validates the request
from the foreign network by processing a destination attribute in an
attempt to find a match on the home network.

36. The system set forth in Claim 22 wherein:
the foreign AAA server receives a response from the AAA
broker server after the AAA broker server validates the request
from the foreign network by processing a user name attribute in an
attempt to find a match on the home network.

37. The system set forth in Claim 22 wherein:
the foreign AAA server receives a response from the AAA
broker server after the AAA broker server validates the request
from the foreign network by processing a destination attribute in an
attempt to find a match on the home network.

38. The system set forth in Claim 22 wherein:
the foreign AAA server receives a rejection response from
the AAA broker server after the AAA broker server determines
that the home network is not found serviced by the AAA broker
server.

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39. The system set forth in Claim 22 wherein:
the foreign AAA server contacts a second AAA broker
server after a rejection response is received from the AAA broker
server.
40. The system set forth in Claim 22 wherein:
the foreign AAA server initiates a security association
pursuant to the returned information in the response message by
transmitting a message to the home network from the foreign
network.
41. The system set forth in Claim 22 wherein:
the foreign AAA server receives a message from the home
network server to the foreign network server after home network
server processes the request from the foreign network server for a
secure connection.

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42. A method for establishing a connection for a mobile node on a communications system having a home network for the mobile node and at least one foreign network comprising the steps of:

receiving a registration request message at a foreign network AAA server;

transmitting a request to a AAA broker server to obtain information to establish a connection between the foreign and home networks; and,

receiving at the foreign network AAA server a response from the AAA broker server,

establishing a connection with a AAA server on the home network based upon the information received from the AAA broker server.

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